REMARKS

The Examiner's rejection of the pending l claims under 35 USC §102 or 103 for being anticipated by the Rohrbaugh et al. published US application no. 2002/0045010 or unpatentable over Rohrbaugh et al. in view of Kuchinski et al. US Patent No. 6001494, the Boire US Patent No. 6103363, the Hanson US Patent No. 4267209, the Tsujimichi et al. US patent publication no. 2001/0036897 and the Kamen et al. US Patent No. 5585153, as these rejections may be attempted to be applied to the pending claims, are respectfully traversed.

In support of this traverse, it is first of all pointed out that, as admitted by the Examiner, Rohrbaugh et al. does not teach applicant's method.

Rohrbaugh et al. teaches modifying a hard surface by coating a hard surface with a plurality of non-photoactive nanoparticles which comprise sodium magnesium lithium furosilicate and allowing the coating to dry to form a transparent, protective coating on the hard surface, namely on a car body.

Applicant on the other hand teaches manufacturing porcelain stoneware tiles with anti –polution and anti-bacterial properties by applying TiO_2 in a covering glaze, adding particles of white pigments and particles of silica to the covering glaze to increase refraction of solar light, adding substances namely magalite and one of zeolite or petalite designed to absorb NOx to the covering glaze, creating micro channels in the covering glaze to increase permeability to water and creating micro uneven areas in the covering glaze to increase the exchange surface between the tile and the atmosphere.

The method of applicant is clearly different from the method of Rohrbaugh et al.

Further Rohrbaugh et al. does not teach depositing TiO_2 in a covering glaze on a stoneware tile.

Applicant does not deposit nanosphere particles comprising sodium magnesium lithium furosilicarte.

The Examiner than cites Hansen U.S. Patent No. 4,267,209 for its teaching of silkscreening a decorative surface on a ceramic tile to obtain a surface with enhanced color and surface characteristics.

Note however that Rohrbaugh et al. and Hansen do not teach increased refraction of solar light or absorbance of NOx or increased permeability to water or increasing the exchange surface between the tile and the atmosphere.

Next the Examiner cites Kuchinski et al. U.S. Patent No. 6,001,494 for its teaching of coating a metal-ceramic composite with anti corrosion enamel wherein the coating is considered a frit that can be made of silica and a metal oxide.

Applicant's reading of Kuchinski et al. is that it teaches a ferrous coated product coated with an electrically conductive aqueous coating composition containing metal oxides.

This is a different coasting for a different purpose than applicant's coating or covering glaze. Note that Kuchinski et al. is concerned with corrosion protection for exhaust systems.

Furthermore Kuchinski et al. does not teach firing at 1200 degrees C, notwithstanfiong the Examiner's contension that from Kuchinski et al., a coating can be fired to any desired temperature including 1200 Degrees Celsius. Kuchinski et al. teaches firing at 750 degrees C.

Kuchinski et al. is not concerened with increased refraction of solar light. Rather Kuchinski et al. is concerened with stability against UV IR or other electromagnetic radiation.

Next the Examiner cites Boire et al. U.S. Patent No. 6,103,363 directed to a substrate with a photo catalytic coating which is dirt-repelant. The coating includes TIO_2 at least partly crystalised in the antase form.

Boire et al. teaches depositing the coating by several different methods but does not disclose silk-screening.

As noted by the Examiner the coating has micro uneven surfaces to increase exchange surface and has wetting properties.

However a combination of Rohrbaugh et al. and Boire et al. does not include white pigments and silica to increase the refraction of solar light.

Next the Examiner refers to Tsujimichi et al. US 2001/0036897 for its teaching of a composition which absorbs NOx. The composition includes titanium dioxide and alumina which is similar to applicants use of TIO_2 and magalite and zeloite or petalite. However Tsujimichi et al does not teach applicant's use of magalite and zeloite or petalite.

The Examiner acknowledges that Rohrbaugh et al. does not teach adding white pigment and silica.

The Examiner contends that Rohrbaugh et al. teaches a composition that increases refraction of UV. Applicant finds no such teaching in Rohrbaugh et al. Applicant only finds reference to UV absorbers in Rohrbaugh et al.

The Examiner then contends that Rohrbaugh et al.'s teaching of using titania suggests applicant's use of white pigment and silica. However there is no teaching in Rohrbaugh et al. to use titania to increase solar light refraction.

Next the Examiner cites Kamen et al. U.S. Patent No. 5,585,153 for its teaching of using silicon rollers to print screen a glass substrate with a decorative coating.

Note that applicant is not concerned with glass substrates.

Next it is noted that applicant teaches using four rollers.

Applicant submits that there is no teaching cited by the Examiner of the use of four rollers. Further applicant submits that the Examiner's contention that one would find it obvious to one of ordinary skill in the art at the time of invention to use four synchronized silicone rollers to carry out four processes as claimed to enhance control of coating manufacture is pure conjecture and not soundly based on the prior art.

The Examiner contends that Rohrbaugh et al teaches firing at 1200 degrees Celsius. This is not supported by Rohrbaugh et al. which teaches heat drying at 155 degrees C to 160 degrees C, preferably at 135 degrees C. Where does Rohrbaugh et al. teach firing at 1200 degrees C.

For the foregoing reasons, applicant submits that claims 22 and 43 now pending in the subject application are clear of the art of record and otherwise in condition for allowance. An early and favorable action to that end is requested.

Respectfully submitted,

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